Installer manual

Eikon
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Transponder card readers

WELL-CONTACT PLUS

VIMAR

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For all the details about the Well-contact Plus system, refer to the installer manual that can be downloaded from the Download ➡ Software ➡ Well-contact Plus section on the website www.vimar.com.

Transponder card readers

Transponder card readers

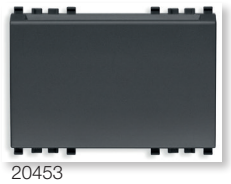
20457, 19457, 16927, 14457

Transponder card reader for installation outside rooms, KNX standard, 2 relay outputs NO 4 A 24 V~, 2 inputs, power supply 12-24 V~ 50-60 Hz and 12-24 V d.c. (SELV) - 3 modules. Supplied without transponder card.

20453, 19453, 16923, 14453

Transponder card reader with vertical pocket for installation inside rooms, KNX standard, 2 relay outputs NO 4 A 24 V~, 2 inputs, supplementary power supply 12-24 V~ 50-60 Hz and 12-24 V d.c. (SELV) - 3 modules.

20457



20453

Functionality

The device controls room access and various additional functions. It also has 2 outputs and 2 inputs. The following functions are the same for both channels.

3 functions are available for the outputs:

- **Not Active**
  Channel without any function.
- **Switch**
  The output is switched according to the other parameters.
- **Staircase**
  According to the other parameters, the output is switched for a certain period of time.

3 functions are also available for the inputs:

- **Not Active**
  Channel without any function.
- **Grouped channels**
  Dimmer or shutter function.
- **Single channels**
  Switch, counter, scene, short/long switch function. Single key dimming, Single key shutter.

Behaviour after bus on/off

Bus off: depends on the parameter settings.
Bus on: depends on the parameter settings.

Behaviour after reset

As for bus on.

Behaviour after power supply on/off

Off: the relays return to Off.
On: as for bus on.

Communication objects

List of existing communication objects (output)

Communication objects

General communication objects

Numero	Nome	Funzione oggetto	Descrizione	Indirizzi di gruppo	Lung...	C	R	W	T	U	Tipo dati	Priorità
0	Transito	Transito		2/2/1	4 Byte	C	R	-	T	-		Basso
1	transitAndPurse	Transito + Borsellino elettron			8 Byte	C	R	-	T	-		Basso
2	CO_AccessoTipo1	Accesso ospite		5/1/1	1 bit	C	R	-	T	-		Basso
3	CO_AccessoTipo2	Accesso servizio		5/2/1	1 bit	C	R	-	T	-		Basso
4	CO_AccessoTipo3	Accesso manutenzione		5/3/1	1 bit	C	R	-	T	-		Basso
5	CO_AccessoTipo4	Accesso installatore		5/4/1	1 bit	C	R	-	T	-		Basso
6	CO_AccessoTipo5	Accesso sicurezza		5/5/1	1 bit	C	R	-	T	-		Basso
7	CO_AccessoTipo6	Accesso assistenza		5/6/1	1 bit	C	R	-	T	-		Basso
8	CO_AccessoTipo7	Accesso amministratore		5/7/1	1 bit	C	R	-	T	-		Basso
9	CO_ControlloScenario	Controllo scenario			1 Byte	C	R	-	T	-		Basso
12	CO_AccessoValido	Accesso valido		4/0/1	1 bit	C	R	-	T	-		Basso
13	CO_LuceDiCortesia	Luce di cortesia		7/3/1	1 bit	C	R	-	T	-		Basso
14	CO_allarme1	Allarme 1			1 bit	C	-	W	T	-		Basso
15	CO_allarme2	Allarme 2			1 bit	C	-	W	T	-		Basso
16	CO_allarme3	Allarme 3			1 bit	C	-	W	T	-		Basso
17	CO_orologio	Orologio			8 Byte	C	-	W	T	U		Basso
18	CO_ora	Ora		0/0/2	3 Byte	C	-	W	T	U		Basso
19	CO_data	Data		0/0/1	3 Byte	C	-	W	T	U		Basso
20	CO_ConfermaServer	Conferma del server		2/0/1	4 Byte	C	-	W	T	U		Basso
21	CO_IDimpianto	Numero impianto		0/0/3	4 Byte	C	-	W	T	-		Basso
22	CO_DatiAccesso	Dati di accesso		3/1/1	10 B...	C	-	W	T	U		Basso
23	CO_DisabilitaAccessoTipo1	Disabilita accesso ospite		4/1/1	1 bit	C	-	W	T	-		Basso
24	CO_DisabilitaAccessoTipo2	Disabilita accesso servizio		4/2/1	1 bit	C	-	W	T	-		Basso
25	CO_DisabilitaAccessoTipo3	Disab. accesso manutenzione		4/3/1	1 bit	C	-	W	T	-		Basso
26	CO_DisabilitaAccessoTipo4	Disab. accesso installatore		4/4/1	1 bit	C	-	W	T	-		Basso
27	CO_DisabilitaAccessoTipo5	Disabilita accesso sicurezza		4/5/1	1 bit	C	-	W	T	-		Basso
28	CO_DisabilitaAccessoTipo6	Disabilita accesso assistenza		4/6/1	1 bit	C	-	W	T	-		Basso
29	CO_DisabilitaAccessoTipo7	Disab. accesso amministratore		4/7/1	1 bit	C	-	W	T	-		Basso
30	CO_Led1	LED 1 On			1 bit	C	-	W	T	-		Basso
31	CO_LampeggioLed1	LED 1 lampeggio veloce		7/5/1	1 bit	C	-	W	T	-		Basso
32	CO_Led2	LED 2 On		7/4/1	1 bit	C	-	W	T	-		Basso
33	CO_LampeggioLed2	LED 2 lampeggio veloce		7/5/1	1 bit	C	-	W	T	-		Basso
34	CO_Led3	LED 3 On		8/4/1	1 bit	C	-	W	T	-		Basso
35	CO_LampeggioLed3	LED 3 lampeggio veloce		7/5/1	1 bit	C	-	W	T	-		Basso
36	CO_suono	Suono singolo			1 bit	C	-	W	T	-		Basso
37	CO_SuonoRipetuto	Suono ripetuto			1 bit	C	-	W	T	-		Basso
38	CO_Reset	Reset allarme			1 bit	C	-	W	T	-		Basso

These objects exist only once.

41	Uscita 1	Accensione/spegnimento			1 bit	C	-	W	-	-		Basso
46	Uscita 1	Stato			1 bit	C	R	-	T	-		Basso
50	Uscita 2	Luce scala			1 bit	C	-	W	-	-		Basso
51	Uscita 2	Blocco			1 bit	C	-	W	-	-		Basso
54	Uscita 2	Stato			1 bit	C	R	-	T	-		Basso
57	Ingresso 1	Commutatore		8/4/1	1 bit	C	R	-	T	-		Basso
62	Ingresso 2	Commutatore		7/4/1	1 bit	C	R	-	T	-		Basso
67	Funzione centralizzata	Accensione/spegnimento			1 bit	C	-	W	-	-		Basso

Output communication objects (example: Output A - Switch, Output B - Staircase)

57	Ingresso 1	Reset del contatore			1 bit	C	-	W	-	U		Basso
60	Ingresso 1	Contatore			1 Byte	C	R	-	T	-		Basso
62	Ingresso 2	Regolazione on/off			1 bit	C	R	-	T	-		Basso
63	Ingresso 2	Regolazione dimmer			4 bit	C	R	-	T	-		Basso
65	Ingresso 2	Stato			1 bit	C	-	W	T	U		Basso

Input communication objects (example: Input A - 8-bit value counter, Input B - single key dimming)

Communication objects

Channel communication objects (if a channel is inactive, no communication objects are present)

No.	ETS name	Function	Description	Function details	length	Flag 1				
						C	R	W	T	U
0	Transito	Transito	reader + pocket	a byte with the access card data is sent with each pass of a valid card: this object must be associated with a dedicated group for each device in each room to enable Well-Contact Suite to compile the list of accesses	4 byte	X	X		X	
1	Transit&Purse	Transit + electronic purse	reader + pocket	a byte with the access card data (including monetary software data) with each pass of a valid card	8 byte	X	X		X	
2	CO_accessType1	Access Guest Access	reader + pocket	this bit is set to 1 when a valid card with a Guest (room customer) profile is recognised	1 bit	X	X		X	
3	CO_accessType2	Access Service Staff	reader + pocket	this bit is set to 1 when a valid card with a Service (cleaning staff) profile is recognised	1 bit	X	X		X	
4	CO_accessType3	Access Maintenance	reader + pocket	this bit is set to 1 when a valid card with a Maintenance (facility maintenance staff) profile is recognised	1 bit	X	X		X	
5	CO_accessType4	Access Installer	reader + pocket	this bit is set to 1 when a valid card with an Installer (system installer) profile is recognised	1 bit	X	X		X	
6	CO_accessType5	Access Security Staff	reader + pocket	this bit is set to 1 when a valid card with a Security (facility security staff) profile is recognised	1 bit	X	X		X	
7	CO_accessType6	Access Assistance	reader + pocket	this bit is set to 1 when a valid card with a Assistance (facility assistance staff) profile is recognised	1 bit	X	X		X	
8	CO_accessType7	Access Administration	reader + pocket	this bit is set to 1 when a valid card with the Administration (facility director) profile is recognised	1 bit	X	X		X	
9	CO_Scen Control	Scene control	reader + pocket	(if the "Scene number for access XY" parameters are activated for the various Guest, Service profiles, etc. and a scene number to be activated is associated for the desired profiles) if access with a valid card with a profile enabled for activation of a scene 1..64, when the card is passed the value of the associated scene in the parameters to that profile will be sent	1 byte	X	X		X	
10	CO_Energy	Energy	pocket	on recognising a valid card this object commands the room's ENERGY FM relay	1 bit	X	X		X	
11	CO_Light	Light	pocket	on recognising a valid card this object commands the room's GENERAL LIGHT relay	1 bit	X	X		X	
12	CO_validAccess	Valid access	reader	on recognising a valid card, this object goes to 1 to activate the electrical lock relay (step relay that can be automatically deactivated by this reader object after a time that can be set in the reader's parameters)	1 bit	X	X		X	
13	CO_courtesyLight	Courtesy Light	reader	on recognising a valid card, this object goes to 1 to activate the electrical lock relay (step relay that can be automatically deactivated by this reader object after a time that can be set in the reader's parameters)	1 bit	X	X		X	
14	CO_alarm1	Alarm 1	reader + pocket	alarm objects inside the device (after a power failure the internal clock must be resynchronised)	1 bit	X		X	X	
15	CO_alarm2	Alarm 2	reader + pocket	alarm objects inside the device ("device fault" alarm, e.g. after a CRC-ERROR)	1 bit	X		X	X	
16	CO_alarm3	Alarm 3	reader + pocket	alarm objects inside the device (full list of 250 transits without transit overwriting activated)	1 bit	X		X	X	
17	CO_clock	Clock	reader + pocket	object needed by Well-Contact Suite to synchronise the system devices	8 bytes	X		X	X	X
18	CO_time	Time	reader + pocket	object needed by Well-Contact Suite to synchronise the system devices	3 byte	X		X	X	X
19	CO_date	Date	reader + pocket	object needed by Well-Contact Suite to synchronise the system devices	3 byte	X		X	X	X
20	CO_serverConfirm	Server Confirm	reader + pocket	object needed by Well-Contact Suite to make the device wait for an Acknowledge response from the reception PC after receiving the sent access data	4 byte	X		X	X	X
21	CO_plantID	Plant number	reader + pocket	object dedicated to system divertification with Well-Contact Suite software	4 byte	X		X	X	

Continues

C = Communication; **R** = Read; **W** = Write; **T** = Transmission; **U** = Enable update

Communication objects

Continued

No.	ETS name	Function	Description	Function details	length	Flag 1				
						C	R	W	T	U
22	CO_accessData	Access data	reader + pocket	object dedicated to system divertification with Well-Contact Suite software	10 byte	X		X	X	X
23	CO_disableAccessType1	Disable Access Guest Access	reader + pocket	if this object is activated the device will deny access to the Guest card profile	1 bit	X		X	X	
24	CO_disableAccessType2	Disable Access Service Access Staff	reader + pocket	if this object is activated the device will deny access to the Service card profile	1 bit	X		X	X	
25	CO_disableAccessType3	Disable Access Maintenance	reader + pocket	if this object is activated the device will deny access to the Service Engineer card profile	1 bit	X		X	X	
26	CO_disableAccessType4	Disable Access Installer	reader + pocket	if this object is activated the device will deny access to the Installer card profile	1 bit	X		X	X	
27	CO_disableAccessType5	Disable Access Security Staff	reader + pocket	if this object is activated the device will deny access to the Security card profile	1 bit	X		X	X	
28	CO_disableAccessType6	Disable Access Assistance	reader + pocket	if this object is activated the device will deny access to the Assistance card profile	1 bit	X		X	X	
29	CO_disableAccessType7	Disable Access Administration	reader + pocket	if this object is activated the device will deny access to the Administration card profile	1 bit	X		X	X	
30	CO_led On1	LED 1 On	reader	LED 1 On (controls on/off of 2nd LED generally used for "do not disturb" or "room occupied")	1 bit	X		X	X	
31	CO_ledBlink1	LED 1 fast blink	reader	LED 1 Fast blink	1 bit	X		X	X	
32	CO_led On2	LED 2 On	reader	LED 2 On (controls on/off of 3rd LED generally used for "room service call")	1 bit	X		X	X	
33	CO_ledBlink2	LED 2 Fast blink	reader	LED 2 Fast blink	1 bit	X		X	X	
34	CO_led On3	LED 3 On	reader	LED 3 On (controls on/off of 4th LED generally used for "make up room")	1 bit	X		X	X	
35	CO_ledBlink3	LED 3 Fast blink	reader	LED 3 Fast blink	1 bit	X		X	X	
36	CO_sound	Sound 1	reader + pocket	single sound (sound can be associated with a 1-bit object on the bus)	1 bit	X		X	X	
37	CO_repeatedSound	Repeated sound 1	reader + pocket	repeated sound (repeated sound can be associated with a 1-bit object on the bus and can be reset with 0 bit)	1 bit	X		X	X	
38	CO_Reset	Reset Alarm	reader + pocket	object used to reset the internal alarms (objects nos. 14,15,16)	1 bit	X	X		X	
39	Not used									
40	CO_CardInserted	Card Inserted	pocket	Simulates the insertion of a generic valid card (to simulate the presence of staff in the room from the supervision page)	1 bit	X		X		x
41	Output 1	Switch on/off	reader + pocket	to switch On/Off relay output (if set as "Switch")	1 bit	X			X	
42	Output 1	Staircase	reader + pocket	to set relay output to automatically deactivate after the time set in the device parameters (if set as "Stair Light")	1 bit	X		X		
43	Output 1	Block	reader + pocket	to block command of relay output via the bus (if set as "Switch" and the "Block" function is activated)	1 bit	X		X		
44	Output 1	Forced	reader + pocket	to force the relay output via bus (if set as "Switch" and the "Forcing" function is activated)	2 bit	X		X		
45	Output 1	Scene	reader + pocket	to activate a scene on the relay output (if set as "Switch" and the Scene function is activated); it is also possible to save the scene if the corresponding function is activated in the bus parameters	1 byte	X		X		
46	Output 1	Status	reader + pocket	to determine the On/Off status of the relay output (if set as "Switch" or as "Staircase")	1 bit	X	X		X	
47	Output 1	Logic 1	reader + pocket	(if set as "Switch" and the "One-object/Two-objects logic" is activated): if a 1 bit is sent to this object the output will be activated when the "on/off" and optional "Logic-2" objects are also activated (depending on the AND/OR conditions that are managed on these objects)	1 bit	X		X		
48	Output 1	Logic 2	reader + pocket	(if set as "Switch" and the " One-object/Two-objects logic" is activated): if a 1 bit is sent to this object the output will be activated when the "on/off" and "Logic-2" objects are also activated (depending on the AND/OR conditions that are managed on these objects)	1 bit	X		X		

Continues

C = Communication; **R** = Read; **W** = Write; **T** = Transmission; **U** = Enable update

Communication objects

Continued

No.	ETS name	Function	Description	Function details	length	Flag 1				
						C	R	W	T	U
49	Output 2	Switch on/off	reader + pocket	to switch relay output On/Off (if set as "Switch")	1 bit	X			X	
50	Output 2	Staircase	reader + pocket	to set the relay output to automatically deactivate after the time set in the device parameters (if set as "Staircase")	1 bit	X		X		
51	Output 2	Block	reader + pocket	to block command of relay output via the bus (if set as "Switch" and the "Block" function is activated)	1 bit	X		X		
52	Output 2	Forced	reader + pocket	to force the relay output via bus (if set as "Switch" and the "Forcing" function is activated)	2 bit	X		X		
45	Output 2	Scene	reader + pocket	to activate a scene on the relay output (if set as "Switch" and the "Scene" function is activated); it is also possible to save the scene if the corresponding function is activated in the bus parameters	1 byte	X		X		
54	Output 2	Status	reader + pocket	to determine the On/Off status of the relay output (if set as "Switch" or as "Staircase")	1 bit	X	X		X	
55	Output 2	Logic 1	reader + pocket	to activate the Logic on the relay output (if set as "Switch" and the **"One-object/Two-objects logic"** function is activated)	1 bit	X		X		
48	Output 2	Logic 2	reader + pocket	to activate the Logic on the relay output (if set as "Switch" and the **"Two-objects logic"** function is activated)	1 bit	X		X		
57	Input 1	Switch	reader + pocket	if the device is set to "single inputs" - for On/Off command from a contact connected to the input (if set as "Switch", with "Switch rising/falling edge" or "Toggle rising/falling edge" or "Send Status" functions)	1 bit	X		X	X	
57	Input 1	Send value	reader + pocket	if the device is set to "single inputs" - to send a numerical value 0-255 to the bus on activation of the input (if set as "Switch", with "Send Value" function "Number" type)	1 byte	X	X		X	
57	Input 1	Send value	reader + pocket	if the device is set to "single inputs" - to send a numerical value 0-65535 to the bus on activation of the input (if set as "Switch", with "Send Value" function "Float" type)	2 byte	X	X		X	
57	Input 1	Counter reset	reader + pocket	if the device is set to "single inputs" - to reset the value of the counter (if set as "Counter")	1 bit	X		X		X
57	Input 1	Button	reader + pocket	if the device is set to "single inputs" - to send an ON or OFF for short and long activation of the input contact, depending on the possible selections in the parameters (if set as "Switch short/long" with "Switch" type)	1 bit	X	X		X	
57	Input 1	Send value	reader + pocket	if the device is set to "single inputs" - to send two different 1-byte values for short and long activation of the input contact, depending on the possible selections in the parameters (if set as " Switch short/long" with "Number" type)	1 byte	X	X		X	
57	Input 1	Send value	reader + pocket	if the device is set to "single inputs" - to send two different 2-byte values for short and long activation of the input contact, depending on the possible selections in the parameters (if set as " Switch short/long" with "Float" type)	2 byte	X	X		X	
57	Input 1	Dimming On/Off	reader + pocket	if the device is set to "single inputs" - to perform On/Off of a dimmable light (if set as "One button dimming")	1 bit	X	X		X	
57	Input 1	Shutter	reader + pocket	if the device is set to "single inputs" - for operation of the shutter by long activation of the input (if set as "One-button shutter control"), it does not control the blinds	1 bit	X	X		X	
57	Input 1/2	Dimming On/Off	reader + pocket	if the device is set to "grouped inputs" - to perform On/Off of a dimmable light by means of short activation of one input or another (if set as "dimming")	1 bit	X	X		X	
57	Input 1/2	Sun protection	reader + pocket	if the device is set to "grouped inputs" - for operation of the shutter by means of activation of one input or another (if set as "shutter control")	1 bit	X	X		X	

Continues

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Communication objects

Continued

No.	ETS name	Function	Description	Function details	length	Flag 1				
						C	R	W	T	U
58	Input 1	Counter Threshold	reader + pocket	if the device is set to "single inputs" - to activate the counter threshold (if set as "Counter" and the "Threshold" parameter is activated with a desired value)	1 byte	X	X		X	X
58	Input 1	Dimming	reader + pocket	if the device is set to "single inputs" - to dim a light (if set as "One button dimming")	4 bit	X	X		X	
58	Input 1	Shutter Stop	reader + pocket	if the device is set to "single inputs" - to stop the shutter (if set as "One button shutter") with short activation of the input	1 bit	X	X		X	
58	Input 1/2	Dimming	reader + pocket	if the device is set to "grouped inputs" - to dim a light by means of long activation of one input or another (if set as "dimming")	4 bit	X	X		X	
58	Input 1/2	Blinds On/Off	reader + pocket	if the device is set to "grouped inputs" - to rotate the blinds by activating one input or another (if set as "Sun protection")	1 bit	X	X		X	
59	Input 1	Scene	reader + pocket	if the device is set to "single inputs" - to send a scene call-up on activation of the input (if set as "Scene" with the desired numerical value): it is also possible to cause a long 2 sec. activation of the input to send a scene-save message to the bus if the parameter with "Save" function is enabled	1 byte	X	X		X	
59	Input 1	1-Bit Scene	reader + pocket	if the device is set to "single inputs" - to send a 1-bit scene call-up on activation of the input (if set as "1-bit" type scene): useful for old KNX devices that operate with 1-bit scenes	1 bit	X	X		X	
60	Input 1	Status	reader + pocket	if the device is set to "single inputs" - to determine the input status (if set as "Switch" with "Toggle rising/falling edge" function)	1 bit	X		X	X	X
60	Input 1	Counter	reader + pocket	if the device is set to "single inputs" - 8-bit value of counter that increases with the input contact pulse count according to the count settings and the bus message send settings in the Parameters (if set as "Counter" with "8 bit" type)	1 byte	X	X		X	
60	Input 1	Counter	reader + pocket	if the device is set to "single inputs" - 16-bit value of counter that increases with the input contact pulse count according to the count settings and the bus message send settings in the Parameters (if set as "Counter" with "16 bit" type)	2 bytes	X	X		X	
60	Input 1	Counter	reader + pocket	if the device is set to "single inputs" - 32-bit value of counter that increases with the input contact pulse count according to the count settings and the bus message send settings in the Parameters (if set as "Counter" with "32 bit" type)	4 bytes	X	X		X	
60	Input 1	Status	reader + pocket	if the device is set to "single inputs" - to determine the input On/Off status (if set as "One button dimming")	1 bit	X		X	X	X
61	Input 1	Blocking object	reader + pocket	if the device is set to "single inputs" - to block sending of bus commands from the input regardless of the switching status of the connected contact, if the "Block" parameter is activated on the input	1 bit	X		X		X
61	Input 1/2	Blocking object	reader + pocket	if the device is set to "grouped inputs" - to block sending of bus commands from the input regardless of the switching status of the connected contact, if the "Block" parameter is activated on the input	1 bit	X		X		X
62	Input 2	Switch	reader + pocket	if the device is set to "single inputs" - for On/Off command from a contact connected to the input (if set as "Switch", with "Switch rising/falling edge" or "Toggle rising/falling edge" or "Send Status" functions)	1 bit	X		X	X	
62	Input 2	Send value	reader + pocket	if the device is set to "single inputs" - to send a numerical value 0-255 to the bus on activation of the input (if set as "Switch", with "Send Value" function of "Number" type)	1 byte	X	X		X	

Continues

C = Communication; **R** = Read; **W** = Write; **T** = Transmission; **U** = Enable update

Communication objects

Continued

No.	ETS name	Function	Description	Function details	length	Flag 1				
						C	R	W	T	U
62	Input 2	Send value	reader + pocket	if the device is set to "single inputs" - to send a numerical value 0-65535 to the bus on activation of the input (if set as "Switch", with "Send Value" function "Float" type)	2 byte	X	X		X	
62	Input 2	Counter reset	reader + pocket	if the device is set to "single inputs" - to reset the value of the counter (if set as "Counter")	1 bit	X		X		X
62	Input 2	Button	reader + pocket	if the device is set to "single inputs" - to send an ON or OFF for short and long activation of the input contact, depending on the possible selections in the parameters (if set as "Switch short/long" press with "Switch" type)	1 bit	X	X		X	
62	Input 2	Send value	reader + pocket	if the device is set to "single inputs" - to send two different 1-byte values for short and long activation of the input contact, depending on the possible selections in the parameters (if set as "Switch short/long" press with "Number" type)	1 byte	X	X		X	
62	Input 2	Send value	reader + pocket	if the device is set to "single inputs" - to send two different 2-byte values for short and long activation of the input contact, depending on the possible selections in the parameters (if set as "Switch short/long" press with "Float" type)	2 byte	X	X		X	
62	Input 2	Dimming On/Off	reader + pocket	if the device is set to "single inputs" - to perform On/Off of a dimmable light (if set as "One button dimming")	1 bit	X	X		X	
62	Input 2	Shutter	reader + pocket	if the device is set to "single inputs" - for operation of the shutter by long activation of the input (if set as "One-button shutter"), it does not control the blinds	1 bit	X	X		X	
63	Input 2	Counter Threshold	reader + pocket	if the device is set to "single inputs" - to activate the counter threshold (if set as "Counter" and the "Threshold" parameter is activated with a desired value)	1 byte	X	X		X	X
63	Input 2	Dimming	reader + pocket	if the device is set to "single inputs" - to dim a light (if set as "single key dimming")	4 bit	X	X		X	
63	Input 2	Shutter Stop	reader + pocket	if the device is set to "single inputs" - to stop the shutter (if set as "1-button shutter control") with short activation of the input	1 bit	X	X		X	
64	Input 2	Scene	reader + pocket	if the device is set to "single inputs" - to send a scene call-up on activation of the input (if set as "Scene" with the desired numerical value): it is also possible a prolonged 2 sec. activation of the input sends a scene-save message to the bus, if the parameter with "Save" function is enabled	1 byte	X	X		X	
64	Input 2	1-Bit Scene	reader + pocket	to send a 1-bit scene call-up on activation of the input (if set as "1-bit type scene): useful for old KNX devices that operate with 1-bit scenes	1 bit	X	X		X	
65	Input 2	Counter	reader + pocket	if the device is set to "single inputs" - 8-bit value of counter that increases with the input contact pulse count according to the count settings and the bus message send settings in the Parameters (if set as "Counter" with "8 bit" type)	1 byte	X	X		X	
65	Input 2	Counter	reader + pocket	if the device is set to "single inputs" - 16-bit value of counter that increases with the input contact pulse count according to the count settings and the bus message send settings in the Parameters (if set as "Counter" with "16 bit" type)	2 byte	X	X		X	
65	Input 2	Counter	reader + pocket	if the device is set to "single inputs" - 32-bit value of counter that increases with the input contact pulse count according to the count settings and the bus message send settings in the Parameters (if set as "Counter" with "32 bit" type)	4 byte	X	X		X	

Continues

C = Communication; **R** = Read; **W** = Write; **T** = Transmission; **U** = Enable update

Communication objects

Continued

No.	ETS name	Function	Description	Function details	length	Flag 1				
						C	R	W	T	U
65	Input 2	Status	reader + pocket	if the device is set to "single inputs" - to determine the input On/Off status (if set as "single key dimming")	1 bit	X		X	X	X
66	Input 2	Blocking object	reader + pocket	if the device is set to "single inputs" - to block sending of bus commands from the bus for the input regardless of the switching status of the connected contact, if the "Block" parameter is activated on the input	1 bit	X		X		X
67	Central Switch function	ON/OFF	reader + pocket	(for simultaneous control of two outputs, if the corresponding parameters are activated on the device outputs)	1 bit	X		X		

C = Communication; **R** = Read; **W** = Write; **T** = Transmission; **U** = Enable update

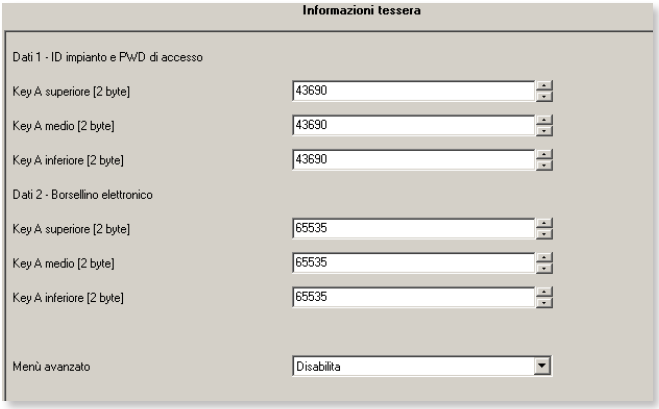
ETS Reference parameters

Card data and software configuration

Card info

Distinguish diversify devices from different systems interfacing with monetary software.

ETS text	Available values [Default value]	Comment
Key A Upper [2 byte]	0-65535	Parameters on card cells for MyFare protocol (for monetary systems)
	[65535]	
Key A Mid [2 byte]	0-65535	
	[65535]	
Key A Lower [2 byte]	0-65535	
	[65535]	
Key A Upper [2 byte]	0-65535	
	[65535]	
Key A Mid [2 byte]	0-65535	
	[65535]	
Key A Lower [2 byte]	0-65535	
	[65535]	
CCP Upper [2 byte]	0-65535	
	[65535]	
CCP Lower [2 byte]	0-65535	
	[65535]	
Advanced Menu	0 Disable	If enabled, a new parameter section appears with various values to be set for interfacing with monetary software (as in notes below)
	1 Enable	
	[0]	



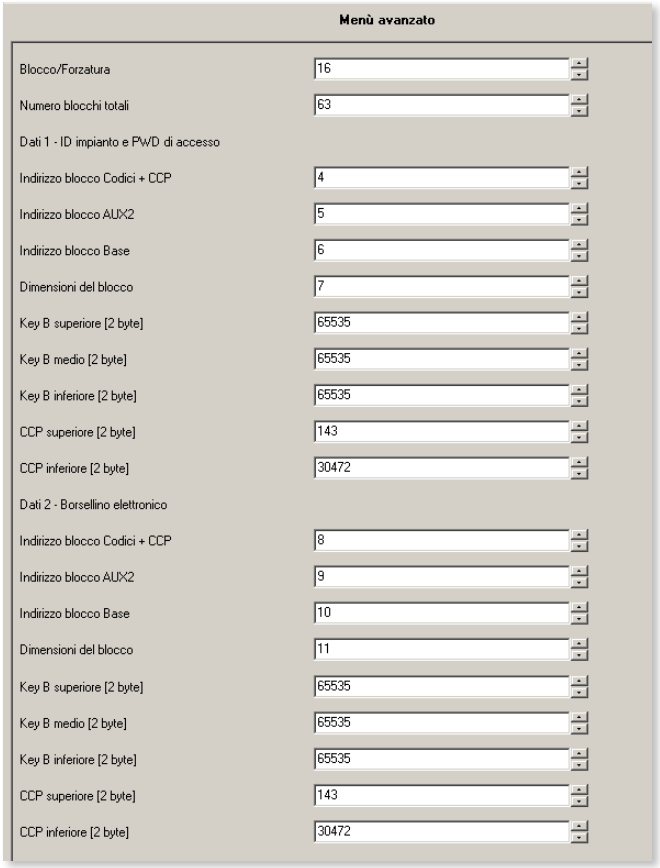
Card Info

Communication objects

Advanced Menu

If the **"Advanced Menu"** parameter is enabled, an additional page for interfacing with monetary software is displayed.

ETS text	Available values [Default value]	Comment
Block Size	0-65535	Parameters on card cells for MyFare protocol (for monetary systems)
	[16]	
Total Block Numbers	0-65535	
	[63]	
Base Address Block	0-65535	
	[4]	
Block AUX1 address	0-65535	
	[5]	
Block AUX2 address	0-65535	
	[6]	
Block Keys address + CCP	0-65535	
	[7]	
Key B Upper [2 byte]	0-65535	
	[65535]	
Key B Mid [2 byte]	0-65535	
	[65535]	
Key B Lower [2 byte]	0-65535	
	[65535]	
CCP Upper [2 byte]	0-65535	
	[65535]	
CCP Lower [2 byte]	0-65535	
	[65535]	
Block Base address	0-65535	
	[8]	
Block AUX1 address	0-65535	
	[9]	
Block AUX2 address	0-65535	
	[10]	
Block Keys address + CCP	0-65535	
	[11]	
Key B Upper [2 byte]	0-65535	
	[65535]	
Key B Mid [2 byte]	0-65535	
	[65535]	
Key B Lower [2 byte]	0-65535	
	[65535]	
CCP Upper [2 byte]	0-65535	
	[143]	
CCP Lower [2 byte]	0-65535	
	[30472]	



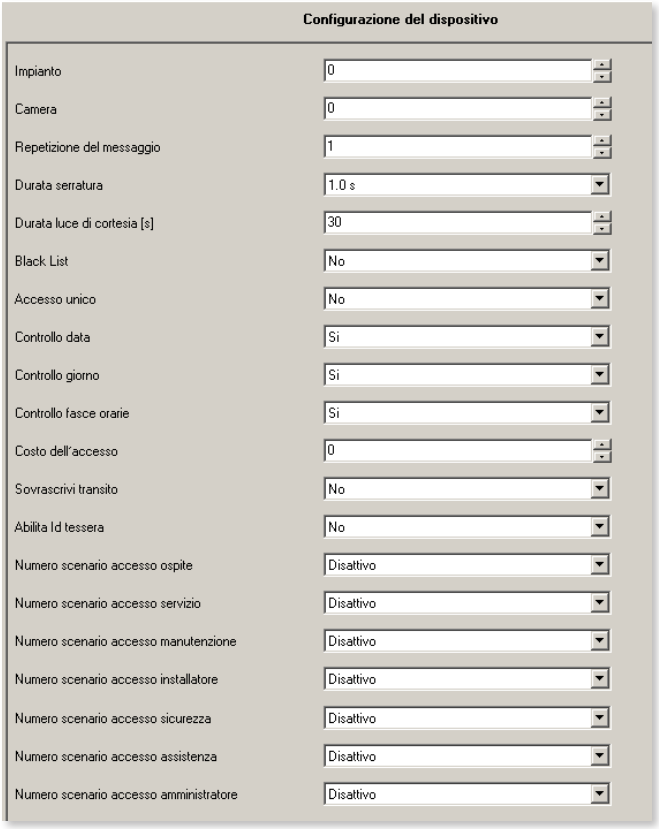
Advanced Menu

Communication objects

Device configuration - General characteristics

Define the behaviour of the device.

ETS text	Available values [Default value]	Comment
Plant	0…2147483647	Parameter not used (for future upgrades)
	[0]	
Room	0...65535	
	[0]	
Repetition of the Message	1...255	Determines the number of repetitions of the "Confirm transit" message
	[1]	
Duration lock	0.1...5 s	Reader only - determines the number of sec. of activity of object 12 "Valid access" which if associated with a relay will activate the solenoid valve
	[0.4]	
Duration Courtesy [s]	1...65535	Reader only - determines how many secs. after activation the object 13 of the device takes to set to "0" (courtesy light turned off by the reader)
	[20]	
Duration Energy [s]	1...65535	Pocket only (the time after card extraction that the pocket sets object 10 to "0")
	[20]	
Duration Light [s]	1...65535	Pocket only (the time after card extraction that the pocket sets object 11 to "0")
	[20]	
Black List	No, Yes	If active, cards associated with reader by WCS will be **blocked** (reverse logic) by the reader
	[0]	
Pocket Light	No, Yes	Pocket only (turns card insertion guide light on)
	[0]	
Single Access	No, Yes	If enabled, the device makes no distinction regarding the type of card (guest, service, etc.), so there are no access type restrictions
	[0]	
Check date	No, Yes	Leave on "Yes"
	[1]	
Check day	No, Yes	
	[1]	
Check timeslot	No, Yes	
	[1]	
Access cost	0…2147483647	For monetary software (if present)
	[0]	
Overwrite transit	No, Yes	For future versions of WCS for storing accesses by the device after reaching the limit of 250 with software temporarily disconnected from the bus
	[0]	
Enable Card ID	No, Yes	Parameter not used
	[1]	
Scene number guest access	1...64, 255	To activate a scene on recognition of a card of this type
	[255=inactive]	
Scene Number Service Staff	1...64, 25	
	5 **[255=inactive]**	
Scene Number Maintenance staff	1...64, 255	
	[255=inactive]	
Scene Number Installer	1...64, 255	
	[255=inactive]	
Scene Number Security Staff	1...64, 255	
	[255=inactive]	
Scene Number Assistance Staff	1...64, 255	
	[255=inactive]	
Scene Number Administration	1...64, 255	
	[255=inactive]	



Device configuration

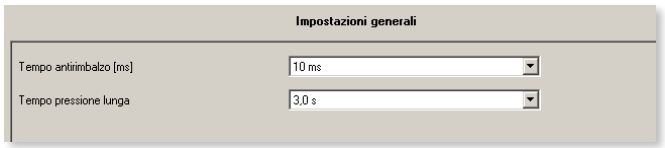
Communication objects

Inputs / Outputs

The following parameters are exclusive and for all channels.

General settings - inputs

ETS text	Available values [Default value]	Comment
Debounce time	10..120 ms **[10]**	Sets the minimum input activation time
Time button long [s]	1-30 sec. **[3]**	Sets the input activation time that can enable advanced functions (such as scene saving)

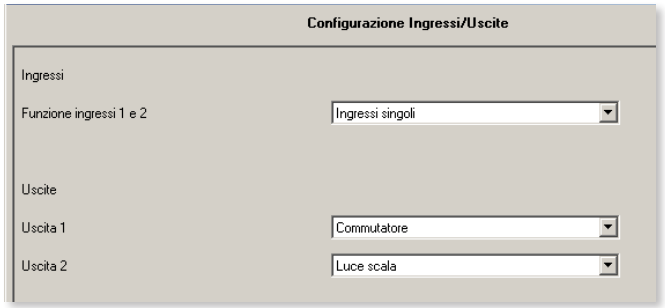


General settings

Channels Configuration

Input/output configuration

ETS text	Available values [Default value]	Comment
Function channel 1/2	Not active Single channels Grouped channels **[0]**	If you select "Grouped channels" you can control the dimmer and shutters by means of a double contact connected to inputs 1/2 (e.g. 20062)
Outputs 1/2	Not active Switch Staircase: **[0]**	Switch: On/off output; Staircase: monostable output



Channel configuration (e.g. Output A - Switch, Output B - Stairs)

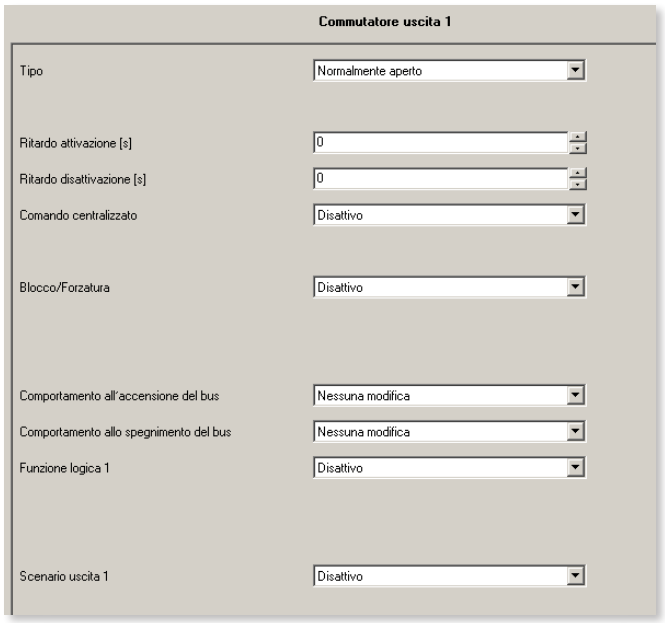
Output: switch 1... 2

The following parameters are available for each channel and are identical for each of them. If a channel is configured as a switch, the following parameters are visible:

Switch parameters - control of outputs 1/2

ETS text	Available values [Default value]	Comment
Type	normally closed normally open **[0]**	
On delay	0...30000 s **[0]**	On delay in seconds
Off delay	0...30000 s **[0]**	Off delay in seconds
Central switch function	Not active active **[0]**	Central function (to control outputs 1/2 simultaneously from the bus)
Block/Forced	Nothing Block Forced **[0]**	To block or force an output from the bus
State at the beginning of Block state	Off On no change **[2]**	If block active
State at the end of block state	Off On no change **[2]**	If block active
Behaviour at bus power up	Off On no change **[2]**	
Behaviour at bus power down	Off On no change **[2]**	
Logic function A/B	not active with one object with two objects **[0]**	To enable logics on outputs (And/Or) with one or two objects

Continues



Switch parameters

Continued

ETS text	Available values [Default value]	Comment
Logic operation	OR AND **[0]**	If logic function active
Scene output 1/2	inactive active **[0]**	Scene activation. If active, an additional page is displayed (see "Scene parameters")

Note. Two-object switching (Logic 1 and Logic 2): a group is created for each "Logic X" object and a group for the "Output Command X" object. The And/Or mode will be applied between the command group and the two logics (for example with And Logic, to activate the output, both Logic 1 and Logic 2 and the Output command must be at 1).

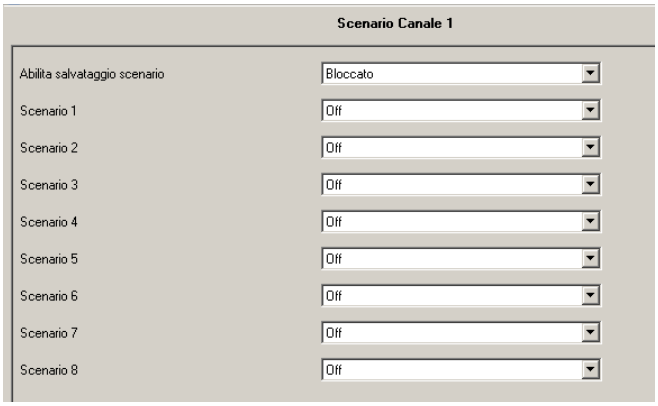
Communication objects

Output, scene channel

8 scene saving options are available for each output. Each record must be assigned to the value.
It is therefore possible to save 8 different scenes to the device output. With **Scene saving enable** you can also set the status of the output for the desired scene with a message from the bus (scene learn).

Scene parameters: scene association with outputs 1/2

ETS text	Available values [Default value]	Comment
Scene saving enable	blocked	
	free	
	[0]	
Scene 1	Off	
	On	
	[0]	
Scene 2	Off	
	On	
	[0]	
Scene 3	Off	
	On	
	[0]	
Scene 4	Off	
	On	
	[0]	
Scene 5	Off	
	On	
	[0]	
Scene 6	Off	
	On	
	[0]	
Scene 7	Off	
	On	
	[0]	
Scene 8	Off	
	On	
	[0]	

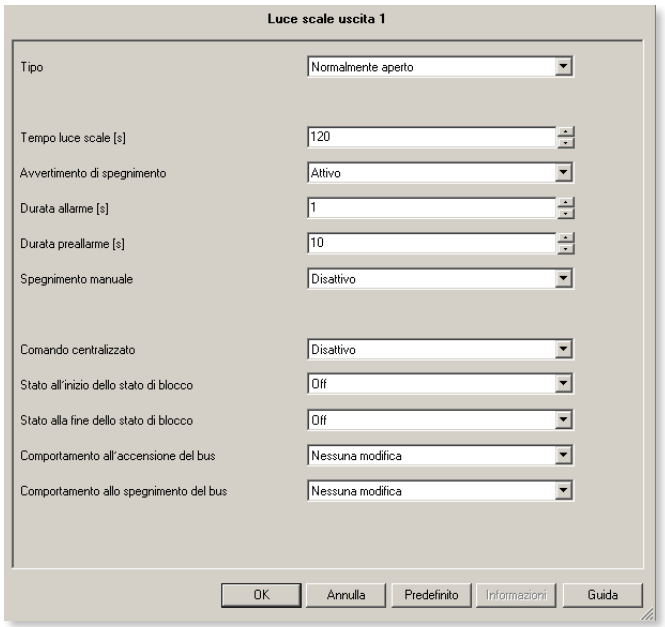


Scene parameters

Communication objects

Output, time stair case

The following parameters are available for each channel and are identical for each of them. If a channel is configured as stair light, the following parameters are visible:



Staircase parameters

Staircase parameters: monostable control of output 1/2

ETS text	Available values [Default value]	Comment
Type	normally closed normally open **[0]**	
Time staircase [s]	0… 30000 **[120]**	Activated output duration
Switch off warning	not active active **[0]**	To make the LED of a KNX push button blink when the relay is about to deactivate
Warning duration [s]	0… 30000 **[120]**	Duration of warning (if off warning enabled). After setting a "Warning duration" and a "Prewarning duration", when the relay deactivates after the set "Time staircase", it remains Off for a time equal to the "Warning duration" and then deactivates for a time equal to the "Prewarning duration"
Prewarning duration [s]	0… 65535 **[120]**	Duration of warning. Three times will be added (if off warning is active). After setting a "Warning duration" and a "Prewarning duration", when the relay deactivates after the set "Time staircase" it remains Off for a time equal to the "Warning duration" and then activates for a time equal to the "Prewarning duration"
Manual switch off	not active active **[0]**	If active, the relay can be deactivated before the staircase time
Central switch function	not active active **[0]**	To control simultaneously the 2 outputs from the bus
State at the beginning of Block state	Off On no change **[0]**	If block active

Continues

Continued

ETS text	Available values [Default value]	Comment
Status at the end of block state	Off On no change **[2]**	If block active
Behaviour at bus power up	Off On no change **[2]**	
Behaviour at bus power down	Off On no change **[2]**	

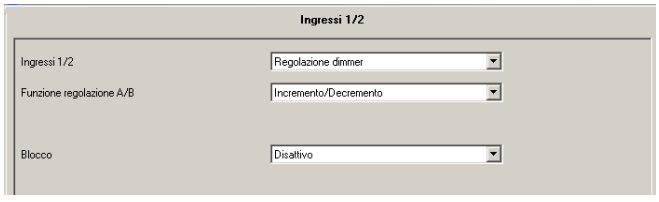
Inputs (grouped inputs)

Dimming A/B

The following parameters are available for each channel and are identical for each of them.

Sun protection A/B

The following parameters are available for each channel and are identical for each of them.



Dimming parameters

Grouped parameters

ETS text	Available values [Default value]	Comment
Input 1/2	Dimming Sun proection **[1]** inactive	
Dimming function A/B	Brighter/Darker Darker/Brighter **[0]**	Defines the activation function of IN 1 and IN 2 for the dimmer
Shutter Function A/B	Down/Up Up/Down **[0]**	Defines the activation function of inputs 1 and 2 for the shutter
Block	0: Inactive 1: Active **[0]**	To inhibit the command of inputs 1/2 from the bus

"Shutter" control parameters

Communication objects

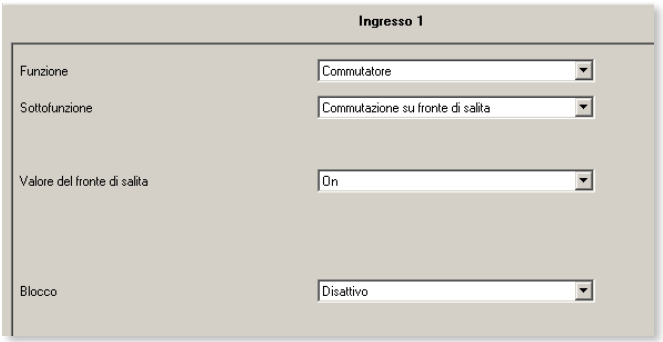
Inputs (single channels)

Switch

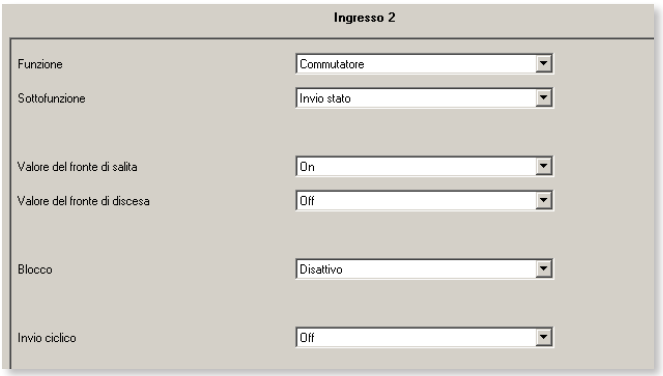
There are 7 options for each channel. Inactive, Switch, Scene, Counter, Switch short/long, One button Dimming, One button Shutter.

Switch parameters - to send commands and values

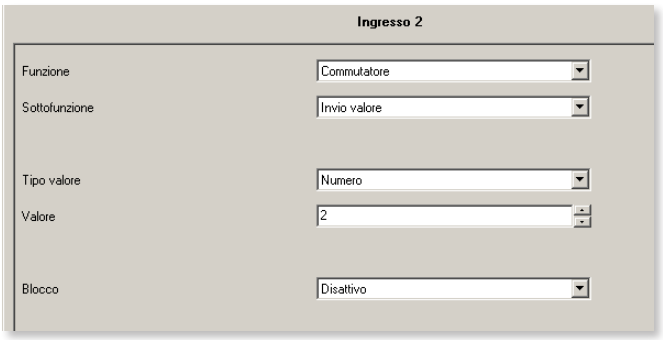
ETS text	Available values [Default value]	Comment
Sub function	Switch rising edge	Rising edge = closure IN contact Falling edge = opening IN contact
	Toggle rising edge	If you set **"Switch"**, an ON or an OFF will be sent for the chosen edge but no signal will be sent for the subsequent change of edge of the input. If you set **"Toggle"**, ON, OFF, ON, etc. will be sent for each selected edge at the input, but it will also be necessary to link the input status object to the same group.
	Switch falling edge	
	Toggle falling edge	
	Status send	By setting**"Status send"**, you can choose whether to send an ON or an OFF command for one edge or the other.
	Send value	
	[3]	With **"Send value"** you choose which byte to send.
Value falling/rising edge	Off	If Switch falling/rising edge
	On	
	[0]	
Value falling edge	Off	If "Status send" set with falling edge
	On	
	[0]	
Value rising edge	Off	If "Status send" set with rising edge
	On	
	[0]	
Send cyclic	inactive	To activate cyclic repetition in the bus
	active	
	[0]	
Cyclic send [s]	1…3000	If cyclic sending active
	[1]	
Value type	Number	If set as "Switch" to send value, choose whether to send a number 0-255 or a float 0-65535
	Float	
	[1]	
Number	0…255	If number (Value)
	[2]	
Float	0-65535	Float (Value)
	[2000]	
Block	inactive	If activated, an object appears that blocks the possibility of controlling the input if set to 1
	active	
	[0]	



Switch parameters, "Rising edge"



Switch parameters, "Status send"



Switch parameters, "Send value"

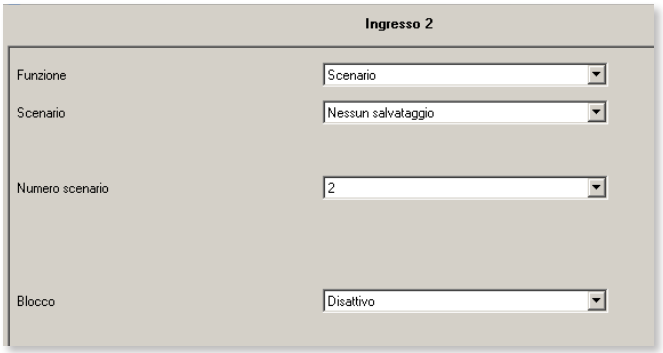
Communication objects

Inputs (scene)

Scene parameters

The selected scene can be activated and saved if required.

ETS text	Available values [Default value]	Comment
Scene	No save	
	save	
	1-Bit	
	[0]	
Scene Number	1-64	If the Scene is "No save" or "Save"
	[2]	
Scene Number	1-2	If the Scene is "1 Bit"
	[2]	
Block	inactive	If active an ETS object will be displayed, which if set to 1 blocks the scenes
	active	
	[2]	



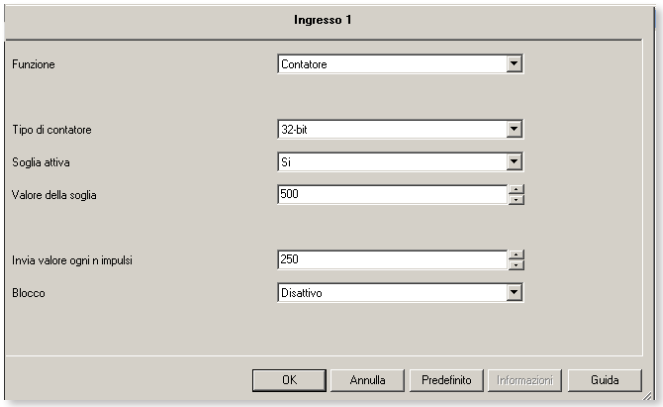
"Scene" parameters

Inputs (counter)

Counter parameters

These allow a counter to be incremented by the input (it is reset on bus power down).

ETS text	Available values [Default value]	Comment
Counter Type	8 bit	
	16 bit	
	32 bit	
	[1]	
Threshold active	no	If active, it establishes a maximum limit for the counter
	yes	
	[0]	
Sending Difference	1-255	8 bit (this determines the frequency in terms of number of pulses at which a message is to be sent over the bus)
	[5]	
Counter Limit	1-255	8 bit
	[50]	
Sending Difference	1-65535	16 bit (determines the frequency in terms of number of pulses at which a message is to be sent over the bus)
	[100]	
Counter Limit	0-65535	16 bit
	[200]	
Sending Difference	1-65535	32 bit (determines the frequency in terms of number of pulses at which a message is to be sent over the bus)
	[250]	
Counter Limit	0-65535	32 bit
	[500]	
Block	inactive	If active an ETS object will be displayed, which if set to 1 blocks the count
	active	
	[0]	



"Counter" parameters

FAQ

External readers (20457, 19457, 16457, 14457)
and pocket readers (20453, 19453, 16453, 14453)

1. What do objects 14, 15 and 16 represent?

- *no.14 CO_alarm1*: the internal clock requires an update (e.g. after a power failure)
- *no.15 CO_alarm2* device fault (for example an internal CRC error)
  This is a **serious error** that should never occur. If it does, reprogram the device using ETS (the problem may be due to a **device memory malfunction**).
- *no.16 CO_alarm3* transit list is full: this is not in itself a device error condition but a possible system state. Activation of this object may occur if you choose to use the internal transit list in "*Overwrite transit*" = "*No*" mode and the PC has been disconnected from the reader for a long period.
  As it is unable to communicate the transits to the Well-contact Suite software, the device saves them in its internal memory. In the future data acquisition by Well-Contact Suite will be implemented.

2. What's the best solution for turning off the *Courtesy light* (controlled by a remote switch connected to the external reader) when the pocket reader disconnects power from the loads after removal of the card?

A group is used to do this. In particular, object "*13 CO_courtesyLight*" of the external reader is very useful.

a. Configure the *courtesy light* so that it is controlled by object "*13 CO_courtesyLight*" of external reader (this object will first go to "1" and then to "0" on recognition of a valid card, after a time interval that can be set in the reader's "*Duration Courtesy light*" parameter).

b. Also configure the *courtesy light* in object *11 CO_light* of pocket reader.

Entrance:

- when the guest enters the room, the *courtesy light* comes on: object "*CO_courtesyLight*", value "*On*";
- when the card is inserted in the pocket, the "*CO_light, value ON*" message is sent (this message has no effect because the light is already on);
- when the timeout expires, the *courtesy light* is turned off by the "*CO_courtesyLight*" message, value "*Off*".

Exit:

- When the card is removed from the pocket, an "*Off*" message is sent to the *courtesy light*: object "*CO_light*", value "*Off*". The message is sent when the "*Duration Light*" timeout expires.
  So if the courtesy light was turned on by the guest, it is now turned off.

3. Is it possible to enable the *Room energy* relay for just 30 seconds when the card is swiped over the external reader and then keep *Room energy* active when the card is inserted in the internal pocket?

Yes, this can be done by using a single relay associated with the *courtesy light* object (together with this light's actuator, if present) and setting the reader parameter "*Duration Courtesy = 30 sec.*". At the same time you must associate the *Relay block* object that controls energy with the energy enable group of the internal pocket (object no. 10 of the pocket), defining in the relay parameters that the *Relay block* is enabled and that the status of the relay on activation of the block is "*On*" and on deactivation is "*Off*".
If after swiping the card over the reader, the card is inserted in the pocket, the relay is blocked in the "*On*" status and therefore ignores the "*Off*" message that arrives from the external reader after 30 seconds. When the card is removed from the pocket, the *Relay block* ("*Off*" parameter) is set to "0".

4. Is there an object that blocks the input/button (effectively disabling it so that it does not send messages)?

Yes, there is an object that blocks the input/button (effectively disabling it so that it does not send messages) that operates as follows:

- associate the "*blocking object*" of the desired input/button is a group;
- if an "*On*" message is sent to the group, the input is blocked;
- if an "*Off*" message is sent to the group, the input is enabled.

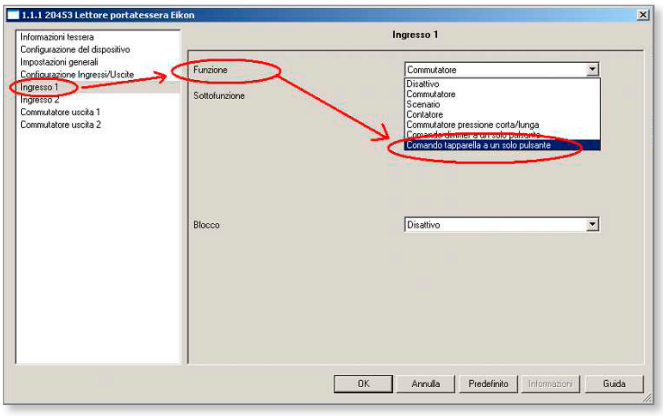
There is no object in the pocket reader that sends an "*Off*" message when the card is inserted (to enable the input/button) and an "*On*" message when the card is removed (to block the input/button).

5. Is it possible to control the shutter by means of conventional buttons connected to the readers (external and/or pocket)?

This can be done by connecting a simple conventional button to the reader's input. However, this solution is fairly impractical because various types of button press are required to control the shutter:

- *long press* = movement (open/close);
- *short press* = stop;
- *short press then long press* = reverses direction movement.

If you still want to adopt this solution, you must set the reader's input as shown in the following figure.



FAQ

6. In the event of a power failure, how long will the external reader and the pocket reader keep the date and time in their memories?

Both devices keep the date and time for at least 2 days.

7. What is the readers' "*server acknowledge*" object used for?

Activation of this object is used for Well-Contact Suite software functions: it forces the reader to wait for a message from the software (sent automatically) acknowledging reception of a transit by the supervision PC before the transit is saved in the internal list. If it does not receive a reception confirmation message, it reattempts to send the transit to Well-contact Suite the number of times set in the device parameters.
A group must be created for each individual reader (e.g. with 10 rooms with pocket readers and one common access, 21 groups will be created). This will also enable WCS to save the transits of the various people on the various readers and the various presences with pocket reader card insertion/removal times.

8. How many scenes can be saved on the device outputs?

On/Off states for 8 different scenes can be saved. In particular, if "*Scene saving enable*" is enabled, it will also be possible to save the status of the output of the desired scene from the 8 available by sending a message over the bus (Scene Learn).

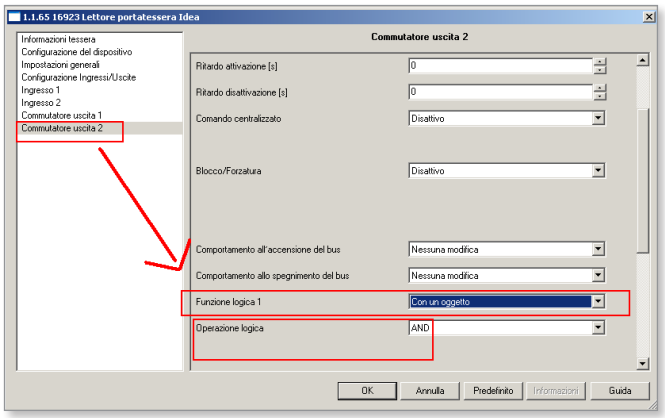
9. Enabling an output using the Logic present in the parameters.

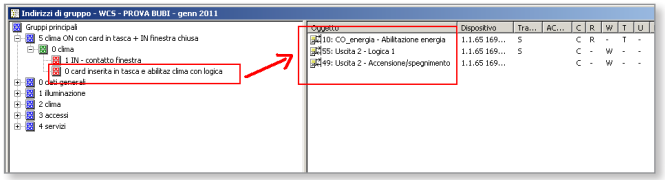
For example, a device output can be activated when one of its inputs is activated only if a valid card is inserted in the pocket. If for example you want to activate OUT-2 of the pocket to turn on heating when the card is inserted, but you also want the opening of a window contact (connected to IN-1) turns heating off until the window is closed, you have to activate the Logic Function on the output and link it with a (1 bit) object using the OUT-2 parameters of 20457 and also select AND Logic Operation. In detail:

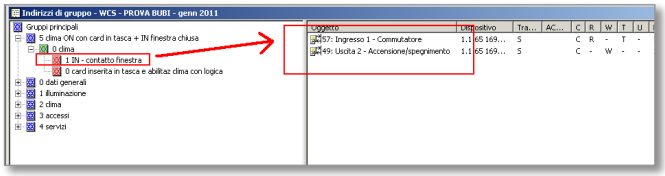
create 1st group which enables output 2 when the card is inserted and activates the logic: activation of the output will be linked in a group to energy enabling by pocket 20453 (by means of object "*CO_Energy – Enable Energy*", with a link to the "*Output 2 – on/off*" object) and the logic on the output will be linked to the same group with the relevant "*Output 2 - Logic* 1" object .

Create the 2nd group to disable/enable output 2 when the window is opened/closed: this creates a second group with the inputs to which the window contact is connected and the object "*Output 2 – on/off*" will be associated; the contact will force the output 2 relay to On/Off; but now you have to link a logic to enable this only if the card is inserted in the pocket.

Let's look in detail at how to set the Logic parameters and create the 2 groups (using IN-1 and OUT-2 of a card reader 20457 to create the two groups):
inserting the card activates the output by setting its Logic to "1": from this point on the output will also be controlled by the window contact group; if the card is not inserted, the Logic remains at "0" so other groups such as the window contact group are unable to control switching.







10. Which external reader objects are used to control an electrical lock and a courtesy light when a valid card is swiped?

Objects 12 and 13 control both "*On*" and "*Off*" if associated with two step relays after a time that can be set in the corresponding reader parameters; therefore object 12 "*CO_validAccess*" controls an electric lock and 13 "*CO_courtesyLight*" controls a courtesy light. The device will set the two objects to "*Off*", deactivating the two relays, which as they are step relays can also be used in bistable mode in other groups.

11. Which vertical pocket objects are used to control enabling of the room *FM* and the *Comfort* status of the thermostat?

Objects nos. 10 and 11 control both "*On*" and "*Off*" if associated with two remote step relays that control respectively the FM and the Light; it is the device sets the two objects to "*Off*" causing the two relays deactivatation on removal of the card after a time that can be set in the parameters. There are also the 1-bit objects nos. 2, 3, 4, 5, 6, 7, 8 used for recognising a card with a given profile (guest, service, maintenance, etc.). So by associating in one group for example the guest card (object 2) with the CNF of the thermostat, if a guest card is recognised the thermostat goes to CNF and on removal of the card it returns to STBY, whereas if another type of card is inserted the thermostat will remain in STBY.

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